

UNION COUNTY FIRE DEPARTMENT	Bidder Complies	
	Yes	No
<p><u>NFPA ZONES B & D REAR, LOWER</u></p> <p>Two (2) Whelen 60*02F*R 600 super LED light heads shall be provided and installed one (1) each side.</p> <p>Each light head shall be equipped with red LED's and a colored lens.</p> <p>The lights shall be installed with a chrome plated mounting flange.</p> <p><u>WARNING LIGHT SYSTEM CERTIFICATION</u></p> <p>The warning light system(s) specified above shall not exceed a combined total amperage draw of 45 AMPS with all lights activated in either the "Clearing Right of Way" or the "Blocking Right of Way" mode.</p> <p>The warning light system(s) shall be certified by the light system manufacturer(s), to meet all of the requirements in the current revision of the NFPA 1901 Fire Apparatus Standard as noted in the General Requirements section of these specifications. The NFPA required "Certificate of Compliance" shall be provided with the completed apparatus.</p> <p>***** AUDIBLE WARNING EQUIPMENT *****</p> <p><u>BACK-UP ALARM</u></p> <p>A Code 3, model # D450C, 87dBA back-up alarm, shall be provided and installed at the rear of the apparatus under the tailboard. The back-up alarm shall activate automatically when the transmission is placed in reverse gear and the ignition is "on".</p> <p><u>AIR HORNS</u></p> <p>Two (2) chrome plated air horns shall be at the front of the vehicle. The air horns shall be mounted in full compliance with NFPA-1901. The supply lines shall be dual 1/4" lines with equal distance from each horn.</p> <p>Each air horn shall be recessed in the front bumper, one (1) on the driver's side and one (1) on the officer's side.</p> <p>The air horn(s) shall be controlled by a foot switch on the officer's side and the steering horn button on driver's side. An air horn/electric DOT horn selector switch shall be furnished on the dash for the drivers steering horn button.</p> <p><u>ELECTRONIC SIREN</u></p> <p>One (1) Whelen # 295SLSA1, 100 watt electronic siren shall be provided featuring: bottom mount control head in cab, "Si-Test" self-diagnostic feature, six (6) function siren, radio repeat and public address.</p> <p>The electronic siren and speaker shall meet the NFPA required SAE certification to ensure compatibility between the siren and speaker.</p> <p>One (1) Whelen, model # SA122FMP polished aluminum siren speakers shall be provided, recessed in the front bumper and wired to the electronic siren.</p>		
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<p><u>FEDERAL Q2B MECHANICAL SIREN</u></p> <p>One (1) Federal Model #Q2B mechanical siren shall be provided to provide audible warning.</p> <p>The Q2B siren shall be semi-recessed into the center of the front bumper. The siren shall be recessed so the front grille portion of the siren is exposed and protruding beyond the bumper.</p> <p>Two (2) floor mounted foot switches shall be provided, one (1) for the officer and one (1) for the driver. A siren brake button shall be provided near the driver's position.</p> <p>**** PUMP AND PLUMBING ****</p> <p><u>PUMP</u></p> <ul style="list-style-type: none"> • HALE QFLO PLUS-125 • 1250 G.P.M. • Single Stage <p>The pump must deliver the percentage of rated capacity at the pressure listed below:</p> <ul style="list-style-type: none"> • 100% of rated capacity at 150 P.S.I. net pump pressure • 100% of rated capacity at 165 P.S.I. net pump pressure • 70% of rated capacity at 200 P.S.I. net pump pressure • 50% of rated capacity at 250 P.S.I. net pump pressure. <p><u>PUMP ASSEMBLY</u></p> <p>The pump shall be of a size and design to mount on the chassis rails of commercial and custom truck chassis, and have the capacity of 1250 gallons per minute (U.S. GPM), NFPA-1901 rated performance.</p> <p><u>PUMP CONSTRUCTION</u></p> <p>The entire pump shall be manufactured and tested at the pump manufacturer's factory.</p> <p>The pump shall be driven by a drive line from the truck transmission. The engine shall provide sufficient horsepower and RPM to enable the pump to meet and exceed its rated performance.</p> <p>The entire pump, both suction and discharge passages, shall be hydrostatically tested to a pressure of 600 PSI. The pump shall be fully tested at the pump manufacturer's factory to performance specs as outlined by the latest NFPA-1901. Pump shall be free from objectionable pulsation and vibration.</p> <p>The pump body and related parts shall be of fine grain alloy cast iron with a minimum tensile strength of 30,000 PSI. All moving parts in contact with water shall be of high quality bronze or stainless steel. Pumps utilizing castings made of lower tensile strength cast iron are not acceptable.</p> <p>Pump body shall be vertically split on a single plane in two sections for easy removal of entire impeller assembly including wear rings and bearings from beneath the pump without disturbing piping or the mounting of the pump in chassis.</p> <p><u>PUMP SHAFT</u></p> <p>Pump shaft to be rigidly supported by three bearings for minimum deflection. The remaining bearings shall be heavy-duty, deep groove ball bearings in the gearbox, and they shall be splash lubricated.</p>		
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<p>The pump shaft shall be heat-treated, electric furnace, corrosion resistant stainless steel. Pump shaft must be sealed with double-lip oil seal to keep road dirt and water out of gearbox.</p> <p><u>PUMP IMPELLER</u></p> <p>Pump impeller shall be hard, fine grain bronze of the mixed flow design, accurately machined, hand-ground and individually balanced. The vanes of the impeller intake eyes shall be hand ground and polished to a sharp edge, and be of sufficient size and design to provide ample reserve capacity utilizing minimum horsepower.</p> <p>Removable, non-corrosive material clearance rings shall be provided.</p> <p><u>MECHANICAL SHAFT SEAL</u></p> <p>The mid-ship pump shall be equipped with a high quality, spring loaded, self-adjusting mechanical seal capable of providing a positive seal to atmosphere under all pumping conditions. This positive seal to atmosphere must be achievable under vacuum conditions up to 26 Hg (draft) or positive suction pressures up to 250 PSI.</p> <p>The mechanical seal assembly shall be 2 inches in diameter and consists of a carbon sealing ring, stainless steel coil spring, Viton rubber boot, and a tungsten carbide seat with a Teflon backup seal provided.</p> <p>Only one (1) mechanical seal shall be required, located on the first stage suction (inboard) side of the pump and be designed to be compatible with a one piece pump shaft. A continuous cooling flow of water from the pump shall be directed through the seal chamber when the pump is in operation.</p> <p><u>PUMP DRIVE UNIT</u></p> <p>The drive unit shall be completely assembled and tested at the pump manufacturer's factory.</p> <p>Pump drive unit shall be of sufficient size to withstand up to 16,000 lbs. ft. of torque of the engine in both road and pump operating conditions. The drive unit shall be designed of ample capacity for lubrication reserve and to maintain the proper operating temperature.</p> <p>The gearbox drive shafts shall be of heat treated chrome nickel steel and at least 2-3/4 inches in diameter on both the input and output drive shafts. They shall withstand the full torque of the engine in both road and pump operating conditions.</p> <p>All gears, both drive and pump, shall be of the highest quality electric furnace chrome nickel steel. Bores shall be ground to size and teeth integrated, chrome-shaven and hardened, to give an extremely accurate gear for long life, smooth, quiet running and higher load carrying capability. An accurately cut spur design shall be provided to eliminate all possible end thrust.</p> <p><u>PUMP RATIO</u></p> <p>The pump ratio shall be selected by the apparatus manufacturer to give maximum performance with the engine and transmission selected.</p> <p>The manufacturer shall supply at time of delivery copies of the pump manufacturer's certification of hydrostatic testing, the engine manufacturer's current certified brake horsepower curve.</p> <p><u>PUMP SHIFT CONTROL</u></p> <p>The drive unit shall be equipped with a power shift. The shifting mechanism shall be a heat treated, hard anodized aluminum power cylinder with stainless steel shaft.</p>		
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<p>An air operated in-cab control for rapid shift shall be provided that locks in road or pump, with a neutral position for use when manual override is required.</p> <p><u>MAIN PUMP - PUMP SHIFT INDICATOR LIGHTS</u></p> <p>For automatic transmissions, three (3) green warning lights shall be provided to indicate to the operator(s) when the pump has completed the shift for Road to Pump position. Two (2) green lights to be located in the truck driving compartment and one (1) green light on pump operator's panel adjacent to the throttle control. For manual transmissions, one (1) green warning light shall be provided for the driving compartment. All lights to have appropriate identification/instruction plates.</p> <p><u>TRANSMISSION LOCK</u></p> <p>The automatic transmission furnished in the chassis shall have a lock-up assembly which brings the transmission to direct drive and prevents the transmission from shifting gears while in the pumping mode.</p> <p><u>BRAKING SYSTEM</u></p> <p>A positive braking system shall be provided to prevent vehicle movement during pumping operations. The air brakes furnished must satisfy this requirement.</p> <p><u>MAIN PUMP MOUNTS</u></p> <p>Extra heavy duty pump mounting brackets shall be furnished. These shall be bolted to the frame rails in such a position to perfectly align the pump so that the angular velocity of the drive line joints shall be the same on each end of the drive shaft. This shall assure full capacity performance with a minimum of vibration. Mounting hardware shall utilize Grade 8 bolts.</p> <p>Pumps which are not mounted directly to the frame will not be considered. Under no circumstance shall the pump function as a frame cross member.</p> <p>***** PRESSURE CONTROL & ACCESSORIES *****</p> <p><u>CLASS ONE "CAPTAIN" PRESSURE GOVERNOR</u></p> <p>A Class 1 "Captain" engine/pump governor/throttle system that is connected directly to the Electronic Control Module (ECM) mounted on the engine shall be provided on the pump operator's panel. The "Captain" is to operate as a pressure sensor (regulating) governor (PSG) eliminating any need for a relief valve on the discharge side of the pump.</p> <p>A special preset feature shall permit a predetermined pressure or RPM to be set. The preset pressure or RPM shall be displayed on the message display of the "Captain". The preset shall be easily adjustable by the operator.</p> <p>When operating in "pressure" mode, the PSG system shall automatically maintain the discharge pressure set by the operator, regardless of flow. The pressure shall remain with the engine's and pump's operating capabilities.</p> <p>When operating in "rpm" mode, the PSG system shall automatically maintain the set engine speed, regardless of engine load. The rpm shall remain with the engine's operating capabilities.</p> <p><u>ELKHART INTAKE RELIEF VALVE</u></p> <p>An Elkhart Model 40 intake relief valve system shall be plumbed on the suction side of the pump to comply fully with NFPA-1901 requirements. Excess pressures shall be plumbed to discharge water under the pump enclosure away from the pump operator.</p>		
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<p><u>PUMP CERTIFICATION</u></p> <p>The pump shall be third party performance tested to meet the requirements of NFPA-1901. To ensure top quality and integrity, the test company shall be Underwriters Laboratories (UL).</p> <p><u>PRIMING SYSTEM</u></p> <p>The priming pump shall be a 12-volt Hale model ESP Oil-Less, positive displacement vane type primer, electrically driven. One priming control shall open the priming valve and start the priming motor. The primer shall be capable of priming without the use of primer oil. The primer shall be connected to the power source with a 300 amp fusible link.</p> <p>The Hale primer shall be activated by a manual valve located on the pump operator's panel. The valve shall activate the primer motor, which shall create a vacuum. Valve actuation may be accomplished while the main pump is operational, if necessary to assure complete prime.</p> <p><u>MASTER DRAIN VALVE</u></p> <p>A rotary type, 12 port master drain valve shall be provided and controlled at the lower portion of the side pump panel. The valve shall be located in pump compartment lower than the main body and connected in such a manner as to allow complete water drainage of the pump body and all required accessories. Water shall be drained below the apparatus body and away from the pump operator.</p> <p><u>INDIVIDUAL BLEEDERS AND DRAINS</u></p> <p>All lines shall drain through the master drain valve or shall be equipped with individual drain valves, easily accessible and labeled.</p> <p>One (1) individual "Innovative Control" lift up drain valve shall be furnished for each 1-1/2" or larger discharge port and each 2-1/2" gated auxiliary suction.</p> <p>Drain/bleeder valves shall be located at the bottom of the side pump module panels.</p> <p>All drains and bleeders shall discharge below the running boards.</p> <p><u>SYNFLEX SUCTION, DISCHARGE, PRESSURE AND CONTROL LINES</u></p> <p>Small lines within the pump enclosure shall be constructed from Synflex hose. Uses include, but are not limited to such lines as priming control, gauge lines, drain lines, air control valves, pump shift, supplemental cooling, foam flush and air bleeder valves.</p> <p><u>TOP MOUNT PUMP MODULE</u></p> <p>The pump module shall be a self-supported structure mounted independently from the body and chassis cab. The design must allow normal frame deflection without imposing stress on the pump module structure or side running boards. The pump module shall be securely mounted to the chassis frame rails.</p> <p>The pump module shall incorporate a formed structure on the top front to support the top mount control panel and required mechanical control handles.</p> <p><u>TOP MOUNTED VALVE CONTROLS</u></p> <p>The valves shall be controlled by vertically operated swing handles. Each handle shall be equipped with a twist-lock, easy-grip knob. The valve control handles shall be mounted in-line.</p>		
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<p>Each valve control handle shall be connected to its respective valve via a control rod and a bell crank mechanism, if needed. Each control rod shall consist of a 1/2" pipe welded to a threaded stud to form a rigid linkage. Each pressure gauge shall be located directly above its respective discharge control handle, and shall be clearly marked by color coded name plates.</p> <p>The pump module shall be a welded frame work utilizing structural steel components properly braced to withstand the rigors of chassis frame flex.</p> <p><u>DUNNAGE AREA</u></p> <p>A dunnage area shall be provided above the pump enclosure, behind the top mount control panel, for equipment mounting and storage. This area shall be furnished with a removable 3/16" aluminum tread plate floor and shall be enclosed on the sides.</p> <p>NOTE: The size of this storage area may vary when top mounted crosslays, booster reel(s), etc., are specified and located in this area.</p> <p><u>TRANSVERSE WALKWAY</u></p> <p>There shall be a transverse walkway located at the rear of the chassis cab, ahead of the pump module. The walkway shall be constructed of 3/16" aluminum tread plate and shall be clear and unobstructed for through traffic. Folding step(s) shall be provided if necessary to maintain NFPA step heights. If steps adjacent to walkway (such as commercial chassis cab access steps) provide NFPA compliant step height, folding steps shall not be provided.</p> <p>A miscellaneous equipment storage compartment shall be provided at either side of the walkway, outboard of the chassis frame rails. A vertically hinged, aluminum tread plate door with positive closure latch shall be provided on the outboard face of each compartment. Compartments shall be ventilated.</p> <p>The pump house walkway shall be approximately 18" wide.</p> <p>***** PUMP SUCTIONS & AUXILIARY INLETS *****</p> <p><u>SUCTION INLETS</u></p> <p>Two (2) 6" N.S.T. suction inlets shall be provided, one on the driver side and one on the officer side pump panel. A removable strainer shall be installed on each inlet.</p> <p><u>PUMP SUCTION ENDS</u></p> <p>The main pump suction inlets shall be furnished with a short suction end, terminating with only the suction threads protruding through the side panel to minimize the distance an exterior appliance protrudes beyond the pump panel.</p> <p>A 6" NST chrome plated long handle pressure vented cap shall be installed on each main inlet of the pump.</p> <p><u>REAR SUCTION</u></p> <p>A 2 1/2" NST rear suction inlet shall be provided at the rear of the vehicle, plumbed from the pump.</p> <p>The rear suction inlet shall be located at the rear of the body in a location directed by engineering, based on the configuration of the body.</p>		
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<p>The rear suction pipe shall be equipped with a chrome 2 1/2" NSTF swivel thread adapter.</p> <p>The rear inlet shall be plumbed utilizing 2 1/2" schedule 10 stainless steel piping, 45 degree elbows and a limited number of 90 degree sweep elbows in an assembly from the pump to the rear of the vehicle.</p> <p>A minimum of two (2) grooved pipe couplings shall be furnished in this assembly to allow for flex and serviceability.</p> <p>The rear suction inlet shall be gated with a 2 1/2" Akron in-line, # 8800 series, full flow, stainless steel ball valve located in the pump compartment.</p> <p>The rear suction valve shall be air operated with a control switch located on the operator's panel with function plate.</p> <p>One (1) 2 1/2" NST chrome plated pressure vented female plug(s) shall be installed the rear suction.</p> <p><u>AUXILIARY SIDE SUCTION(S)</u></p> <p>One (1) 2-1/2" auxiliary suction shall be provided at the driver side pump panel, to the rear of the main inlet. The 2-1/2" auxiliary suction shall terminate with a removable strainer, chrome plated 2-1/2" NST female swivel with a chrome plated plug and retaining chain.</p> <p>An Akron Brass 2 1/2" Generation II Swing-Out™ Valve shall be provided for the driver's side rear auxiliary suction. The valve shall have an all brass body with flow optimizing stainless steel ball and dual polymer seats.</p> <p>A 1/4 turn swing control handle shall be provide on the driver side rear auxiliary suction valve</p> <p>One (1) 2-1/2" auxiliary suction shall be provided at the officer side pump panel, to the rear of the main inlet. The 2-1/2" auxiliary suction shall terminate with a removable strainer, chrome plated 2-1/2" NST female swivel with a chrome plated plug and retaining chain.</p> <p>An Akron Brass 2 1/2" Generation II Swing-Out™ Valve shall be provided for the officer's side rear auxiliary suction. The valve shall have an all brass body with flow optimizing stainless steel ball and dual polymer seats.</p> <p>A 1/4 turn swing control handle shall be provided on the officer side rear auxiliary suction valve.</p> <p>All side gated inlet valves shall be recess mounted behind the side pump panels or body panels.</p> <p><u>TANK TO PUMP</u></p> <p>One (1) 4" tank to pump line shall be, piped through the front bulkhead of the tank with a 90 degree elbow down into the tank sump. This line shall be plumbed directly into the rear of the pump suction manifold for maximum efficiency.</p> <p>A check valve shall be provided to prevent accidental pressurization of the water tank through the pump connection. Connection from the valve to the tank shall be made by using a non-collapsible flexible rubber hose.</p> <p>An Akron Brass 3" Generation II Swing-Out™ Valve shall be provided between the pump suction manifold and the water tank. The valve shall have an all brass body with flow optimizing stainless steel ball and dual polymer seats.</p>		
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<p>A locking push/pull swing control handle shall be located on the operator's panel with function plate.</p> <p><u>TANK FILL</u></p> <p>One (1) 2" gated full flow pump to tank refill line controlled at the pump panel shall be provided. A deflector shield inside the tank shall be furnished. Tank fill plumbing shall utilize 2" high pressure hose for tank connection to accommodate flexing between components.</p> <p>An Akron Brass 2" Generation II Swing-Out™ Valve shall be provided between the pump discharge manifold and the water tank. The valve shall have an all brass body with flow optimizing stainless steel ball and dual polymer seats.</p> <p>A locking push/pull swing control handle shall be located on the operator's panel with function plate.</p> <p>***** DISCHARGES & ACCESSORIES - TOP MOUNT *****</p> <p><u>DRIVER'S SIDE MAIN DISCHARGE #1</u></p> <p>A discharge shall be provided and located at the driver's side pump panel. The driver's side discharges # 1 shall terminate with NST threads, through the left panel above the main pump intake.</p> <p>The main pump discharge shall be plumbed directly from the pump discharge manifold utilizing direct connect discharge valve flanges.</p> <p>An Akron Brass 2 1/2" Generation II Swing-Out™ Valve shall be provided for the driver's side #1 discharge. The valve shall have an all brass body with flow optimizing stainless steel ball and dual polymer seats.</p> <p>The discharge valve shall be equipped with a straight 2 1/2" NST adapter that shall be equipped with a 2 1/2" NST, 30-degree, chrome plated elbow.</p> <p>A 2 1/2" NST chrome plated pressure vented cap shall be installed on driver's side #1 discharge.</p> <p>The driver's side # 1 discharge valve shall be controlled by a locking push/pull swing handle located on the top mount operator's panel.</p> <p>The driver's side # 1 discharge shall be equipped with a 2 1/2" diameter Innovative Controls pressure gauge. The gauge shall have a rugged corrosion free stainless steel case and clear scratch resistant molded crystals with captive O-ring seals to ensure distortion free viewing and seal the gauge. The gauge shall be filled with glycerin to dampen shock and vibration, lubricate the internal mechanisms, prevent lens condensation and ensure proper operation from -40°F to +160°F.</p> <p>The gauge shall exceed ANSI B40.1 Grade A requirements with an accuracy of +/- 1.5% full scale and include a size appropriate phosphorous bronze bourdon tube with a reinforced lap joint and large tube base to increase the tube life and gauge accuracy.</p> <p>A polished chrome-plated stainless steel bezel shall be provided to prevent corrosion and protect the lens and gauge case. The gauge shall have black graphics on a white background.</p>		
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<div> <div> <u>DRIVER'S SIDE MAIN DISCHARGE #2</u> </div> <div> <p>An discharge shall be provided and located at the driver's side pump panel. The driver's side discharges # 2 shall terminate with NST threads, through the left panel above the main pump intake.</p> <p>The main pump discharge shall be plumbed directly from the pump discharge manifold utilizing direct connect discharge valve flanges.</p> <p>An Akron Brass 2 1/2" Generation II Swing-Out™ Valve shall be provided for the driver's side #2 discharge. The valve shall have an all brass body with flow optimizing stainless steel ball and dual polymer seats.</p> <p>The discharge valve shall be equipped with a straight 2 1/2" NST adapter that shall be equipped with a 2 1/2" NST, 30-degree, chrome plated elbow.</p> <p>A 2 1/2" NST chrome plated pressure vented cap shall be installed on driver's side # 2 discharge.</p> <p>The driver's side # 2 discharge valve shall be controlled by a locking push/pull swing handle located on the top mount operator's panel.</p> <p>The driver's side # 2 discharge shall be equipped with a 2 ½" diameter Innovative Controls pressure gauge. The gauge shall have a rugged corrosion free stainless steel case and clear scratch resistant molded crystals with captive O-ring seals to ensure distortion free viewing and seal the gauge. The gauge shall be filled with glycerin to dampen shock and vibration, lubricate the internal mechanisms, prevent lens condensation and ensure proper operation from -40°F to +160°F.</p> <p>The gauge shall exceed ANSI B40.1 Grade A requirements with an accuracy of +/- 1.5% full scale and include a size appropriate phosphorous bronze bourdon tube with a reinforced lap joint and large tube base to increase the tube life and gauge accuracy.</p> <p>A polished chrome-plated stainless steel bezel shall be provided to prevent corrosion and protect the lens and gauge case. The gauge shall have black graphics on a white background.</p> </div> <div> <u>OFFICER'S SIDE MAIN DISCHARGE #1</u> </div> <div> <p>A discharge shall be provided and located at the officer's side pump panel. The officer's side discharges #1 shall terminate with NST threads, through the officer's side panel above the main pump intake.</p> <p>The main pump discharge shall be plumbed directly from the pump discharge manifold utilizing direct connect discharge valve flanges.</p> <p>An Akron Brass 2 1/2" Generation II Swing-Out™ Valve shall be provided for the officer's side #1 discharge. The valve shall have an all brass body with flow optimizing stainless steel ball and dual polymer seats.</p> <p>The discharge valve shall be equipped with a straight 2 1/2" NST adapter that shall be equipped with a 2 1/2" NST, 30-degree, chrome plated elbow.</p> <p>A 2 1/2" NST chrome plated pressure vented cap shall be installed on officer's side # 1 discharge.</p> <p>The officer's side # 1 discharge valve shall be controlled by a locking push/pull swing handle located on the top mount operator's panel.</p> </div> </div>		
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<p>The officer's side # 1 discharge shall be equipped with a 2 ½" diameter Innovative Controls pressure gauge. The gauge shall have a rugged corrosion free stainless steel case and clear scratch resistant molded crystals with captive O-ring seals to ensure distortion free viewing and seal the gauge. The gauge shall be filled with glycerin to dampen shock and vibration, lubricate the internal mechanisms, prevent lens condensation and ensure proper operation from -40°F to +160°F.</p> <p>The gauge shall exceed ANSI B40.1 Grade A requirements with an accuracy of +/- 1.5% full scale and include a size appropriate phosphorous bronze bourdon tube with a reinforced lap joint and large tube base to increase the tube life and gauge accuracy.</p> <p>A polished chrome-plated stainless steel bezel shall be provided to prevent corrosion and protect the lens and gauge case. The gauge shall have black graphics on a white background.</p> <p><u>OFFICER'S SIDE MAIN DISCHARGE #2</u></p> <p>A discharge shall be provided and located at the officer's side pump panel. The officer's side discharges #2 shall terminate with NST threads, through the officer's side panel above the main pump intake.</p> <p>The main pump discharge shall be plumbed directly from the pump discharge manifold utilizing direct connect discharge valve flanges.</p> <p>An Akron Brass 2 1/2" Generation II Swing-Out™ Valve shall be provided for the officer's side #2 discharge. The valve shall have an all brass body with flow optimizing stainless steel ball and dual polymer seats.</p> <p>The discharge valve shall be equipped with a straight 2 1/2" NST adapter that shall be equipped with a 2 1/2" NST, 30-degree, chrome plated elbow.</p> <p>A 2 1/2" NST chrome plated pressure vented cap shall be installed on officer's side #2 discharge.</p> <p>The officer's side #2 discharge valve shall be controlled by a locking push/pull swing handle located on the top mount operator's panel.</p> <p>The officer's side #2 discharge shall be equipped with a 2 ½" diameter Innovative Controls pressure gauge. The gauge shall have a rugged corrosion free stainless steel case and clear scratch resistant molded crystals with captive O-ring seals to ensure distortion free viewing and seal the gauge. The gauge shall be filled with glycerin to dampen shock and vibration, lubricate the internal mechanisms, prevent lens condensation and ensure proper operation from -40°F to +160°F.</p> <p>The gauge shall exceed ANSI B40.1 Grade A requirements with an accuracy of +/- 1.5% full scale and include a size appropriate phosphorous bronze bourdon tube with a reinforced lap joint and large tube base to increase the tube life and gauge accuracy.</p> <p>A polished chrome-plated stainless steel bezel shall be provided to prevent corrosion and protect the lens and gauge case. The gauge shall have black graphics on a white background.</p> <p><u>TOP MOUNT DISCHARGE CONTROLS</u></p> <p>All top mount valves shall be controlled by a locking push/pull swing handle unless otherwise noted in the individual discharge below.</p>			
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DECK GUN DISCHARGE

A deck gun discharge shall be plumbed from the pump to an area on top of the vehicle. The deck gun piping shall be firmly supported and braced.

The deck gun discharge shall be located in the center of the dunnage area above the pump module. A pedestal type, 1/4" steel plate support assembly shall be provided to stabilize deck gun plumbing below deck gun mount flange.

The deck gun discharge pipe shall terminate with 3" NPT threads.

The deck gun piping shall be designed so the overall height of the deck gun in the mounted/stowed position does not exceed the tallest point on the cab/body.

The deck gun discharge shall be plumbed utilizing 3" schedule 10 stainless steel piping, 45 degree elbows and a limited number of 90 degree sweep elbows in an assembly from the pump to the deck gun location.

A minimum of one (1) grooved pipe coupling shall be furnished in this assembly to allow for flex and serviceability.

An Akron Brass 3" Generation II Swing-Out™ Valve shall be provided for the deck gun discharge. The valve shall have an all brass body with flow optimizing stainless steel ball and dual polymer seats.

The deck gun discharge valve shall be controlled by a push/pull handle located on the operator's panel.

The deck gun discharge shall be equipped with a 2 1/2" diameter Innovative Controls pressure gauge. The gauge shall have a rugged corrosion free stainless steel case and clear scratch resistant molded crystals with captive O-ring seals to ensure distortion free viewing and seal the gauge. The gauge shall be filled with glycerin to dampen shock and vibration, lubricate the internal mechanisms, prevent lens condensation and ensure proper operation from -40°F to +160°F.

The gauge shall exceed ANSI B40.1 Grade A requirements with an accuracy of +/- 1.5% full scale and include a size appropriate phosphorous bronze bourdon tube with a reinforced lap joint and large tube base to increase the tube life and gauge accuracy.

A polished chrome-plated stainless steel bezel shall be provided to prevent corrosion and protect the lens and gauge case. The gauge shall have black graphics on a white background.

HORIZONTAL SPEEDLAY #1

Speedlay #1 shall be a transverse hose bed, which shall be designed as an integral part of the pump module design, located forward of the pump just above the frame rails. Hose deployment shall be accomplished from either side of the apparatus. The speedlay hose bed flooring shall be designed to be removable, constructed from brushed finish, perforated aluminum material.

The hose shall be capable of being reloaded from either side of the vehicle and from access slots provided on the front of the pump module when standing in the pump module walkway.

The outer edge of the speedlay #1 hosebed shall be trimmed stainless steel scuff plates.

The speedlay #1 discharge shall terminate through the rear wall of the hosebed with a 1 1/2" NSTM chicksan swivel adapter. The hosebed rear wall shall be slotted to allow the swivel to through the wall, allowing the pre-connected hose to be pulled off either side of the apparatus without kinking the hose at the coupling connection.

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Complies

Yes No

Speedlay #1 shall be designed to have a minimum total capacity of 3.5 cubic feet as required by NFPA -1901 to accommodate a minimum of 200 feet of 1-3/4" fire hose. The hose shall be loaded in a double stack configuration.

The speedlay #1 discharge shall be plumbed utilizing 2" schedule 10 stainless steel piping and/or flexible hose, 45 degree elbows and a limited number of 90 degree sweep elbows in an assembly from the pump to speedlay hosebed.

A minimum of one (1) grooved pipe coupling shall be furnished in this assembly to allow for flex and serviceability.

An Akron Brass 2" Generation II Swing-Out™ Valve shall be provided for the speedlay #1 discharge. The valve shall have an all brass body with flow optimizing stainless steel ball and dual polymer seats.

The speedlay #1 discharge valve shall be controlled by a push/pull handle located on the operator's panel.

The speedlay #1 discharge shall be equipped with a 2 1/2" diameter Innovative Controls pressure gauge. The gauge shall have a rugged corrosion free stainless steel case and clear scratch resistant molded crystals with captive O-ring seals to ensure distortion free viewing and seal the gauge. The gauge shall be filled with glycerin to dampen shock and vibration, lubricate the internal mechanisms, prevent lens condensation and ensure proper operation from -40°F to +160°F.

The gauge shall exceed ANSI B40.1 Grade A requirements with an accuracy of +/- 1.5% full scale and include a size appropriate phosphorous bronze bourdon tube with a reinforced lap joint and large tube base to increase the tube life and gauge accuracy.

A polished chrome-plated stainless steel bezel shall be provided to prevent corrosion and protect the lens and gauge case. The gauge shall have black graphics on a white background.

HORIZONTAL SPEEDLAY #2

Speedlay #2 shall be a transverse hose bed, which shall be designed as an integral part of the pump module design, located forward of the pump just above the lower speedlay. Hose deployment shall be accomplished from either side of the apparatus. The speedlay hose bed flooring shall be designed to be removable, constructed from brushed finish, perforated aluminum material.

The hose shall be capable of being reloaded from either side of the vehicle and from access slots provided on the front of the pump module when standing in the pump module walkway.

The outer edge of the speedlay #2 hosebed shall be trimmed stainless steel scuff plates.

The speedlay #2 discharge shall terminate through the rear wall of the hosebed with a 1 1/2" NSTM chicksan swivel adapter. The hosebed rear wall shall be slotted to allow the swivel to through the wall, allowing the pre-connected hose to be pulled off either side of the apparatus without kinking the hose at the coupling connection.

Speedlay #2 shall be designed to have a minimum total capacity of 3.5 cubic feet as required by NFPA -1901 to accommodate a minimum of 200 feet of 1-3/4" fire hose. The hose shall be loaded in a double stack configuration.

The speedlay #2 discharge shall be plumbed utilizing 2" schedule 10 stainless steel piping and/or flexible hose, 45 degree elbows and a limited number of 90 degree sweep elbows in an assembly from the pump to speedlay hosebed.

UNION COUNTY FIRE DEPARTMENT	Bidder Complies	
	Yes	No
<p>A minimum of one (1) grooved pipe coupling shall be furnished in this assembly to allow for flex and serviceability.</p> <p>An Akron Brass 2" Generation II Swing-Out™ Valve shall be provided for the speedlay #2 discharge. The valve shall have an all brass body with flow optimizing stainless steel ball and dual polymer seats.</p> <p>The speedlay #2 discharge valve shall be controlled by a push/pull handle located on the operator's panel.</p> <p>The speedlay #2 discharge shall be equipped with a 2 ½" diameter Innovative Controls pressure gauge. The gauge shall have a rugged corrosion free stainless steel case and clear scratch resistant molded crystals with captive O-ring seals to ensure distortion free viewing and seal the gauge. The gauge shall be filled with glycerin to dampen shock and vibration, lubricate the internal mechanisms, prevent lens condensation and ensure proper operation from -40°F to +160°F.</p> <p>The gauge shall exceed ANSI B40.1 Grade A requirements with an accuracy of +/- 1.5% full scale and include a size appropriate phosphorous bronze bourdon tube with a reinforced lap joint and large tube base to increase the tube life and gauge accuracy.</p> <p>A polished chrome-plated stainless steel bezel shall be provided to prevent corrosion and protect the lens and gauge case. The gauge shall have black graphics on a white background.</p> <p><u>SPEED LAY HOSEBED HOSE RETENTION</u></p> <p>Vinyl coated polyester covers shall be provided on each side of the speed lays to retain hose in the speed lays. The covers shall be secured with expandable loops sewn into the covers and hooks on the apparatus.</p> <p>The speed lay end flap shall be red in color.</p> <p><u>BOOSTER REEL #1 DISCHARGE</u></p> <p>A 1 1/2" booster reel discharge shall be plumbed from the pump to the booster reel.</p> <p>The booster reel discharge shall be plumbed from the valve to the hose reel utilizing 1" high pressure hose. The end of the hose connected to the hose reel shall be equipped with a swivel end for ease in hose replacement.</p> <p>A 1 1/2" Akron, #8800 series, full flow, stainless steel ball valve shall be provided for the booster reel #1 discharge.</p> <p>The booster reel discharge valve shall be controlled by a push/pull handle located on the operator's panel.</p> <p>The booster reel discharge shall be equipped with a 2 ½" diameter Innovative Controls pressure gauge. The gauge shall have a rugged corrosion free stainless steel case and clear scratch resistant molded crystals with captive O-ring seals to ensure distortion free viewing and seal the gauge. The gauge shall be filled with glycerin to dampen shock and vibration, lubricate the internal mechanisms, prevent lens condensation and ensure proper operation from -40°F to +160°F.</p> <p>The gauge shall exceed ANSI B40.1 Grade A requirements with an accuracy of +/- 1.5% full scale and include a size appropriate phosphorous bronze bourdon tube with a reinforced lap joint and large tube base to increase the tube life and gauge accuracy.</p>		
COMMERCIAL PUMPER SPECIFICATIONS		

<div> <div>UNION COUNTY FIRE DEPARTMENT</div> </div>	Bidder Complies	
	Yes	No
<p>A polished chrome-plated stainless steel bezel shall be provided to prevent corrosion and protect the lens and gauge case. The gauge shall have black graphics on a white background.</p> <p><u>BOOSTER REEL #1</u></p> <p>One (1) painted steel electric rewind booster reel shall be furnished. The reel shall be equipped with a one (1) inch 90° full flow swivel joint and an adjustable brake for freewheeling, drag or full lock operation. Color shall be graphite.</p> <p>The booster reel #1 shall be mounted above the pump enclosure towards the driver's side of the unit.</p> <p>Booster reel rewind shall be controlled by a pump panel mounted push button on the driver's side panel. The booster reel circuit shall be equipped with a shielded toggle switch to act as a booster reel disconnect to avoid accidental actuation of the booster reel rewind button.</p> <p>Each booster reel shall be equipped with 150' of 1" booster hose in (1) 100' section and (1) 50' section. Each length shall be fitted with NST couplings.</p> <p>Two (2) horizontal hose rollers of polished stainless steel and guide spools shall be placed one (1) on each side panel.</p> <p>**** PUMP PANEL & ACCESSORIES ****</p> <p><u>PUMP PANEL - TOP MOUNT</u></p> <p>The pump operator's control panel shall be located above the pump towards the rear of the transverse walkway area with the operator facing the rear of the apparatus to operate the pump controls.</p> <p>The top and side panels shall be completely removable and designed for easy access and servicing.</p> <p><u>TOP MOUNT GAUGE PANEL</u></p> <p>The top operator's panel shall be fabricated from 14-gauge 304L stainless steel with a #4, (150/180 grit), standard polished finish.</p> <p><u>SIDE PUMP PANEL MATERIAL</u></p> <p>The left and right side pump panel shall be fabricated from 14-gauge 304L stainless steel with a #4, (150/180 grit), standard polished finish.</p> <p><u>HINGED GAUGE PANEL</u></p> <p>An angled full width, horizontally hinged gauge access panel shall be provided at the top mount operator's position. Chrome plated positive locks shall be provided along with gas shock holders to secure the panel in the opened position.</p> <p><u>VERTICALLY HINGED, SPLIT PUMP PANEL DRIVER SIDE</u></p> <p>The driver side pump panel shall be split, vertically hinged, to provide complete access to the pump and plumbing on the driver side of the pump enclosure. The panels shall be equipped with stainless steel hinges and secured with push type locks to hold the panels closed. The drains located on the driver side panel shall be fastened to the lower panel, which shall be stationary.</p>		
<div>COMMERCIAL PUMPER SPECIFICATIONS</div>		

UNION COUNTY FIRE DEPARTMENT	Bidder Complies	
	Yes	No
<p><u>VERTICALLY HINGED, SPLIT PUMP PANEL OFFICER SIDE</u></p> <p>The officer's side pump panel shall be split, vertically hinged, to provide complete access to the pump and plumbing on the officer side of the pump enclosure. The panels shall be equipped with stainless steel hinges and secured with push type locks to hold the panels closed. The drains located on the officer's side panel shall be fastened to the lower panel, which shall be stationary.</p> <p><u>PANEL FASTENERS</u></p> <p>Stainless steel machine screws and lock washers shall be used to hold these panels in position. The panels shall be easily removable to provide complete access to the pump for major service.</p> <p><u>CAPS AND ADAPTERS SAFETY TETHER</u></p> <p>All applicable discharge and suction caps, plugs and adapters shall be equipped with chrome plated ball chain and secured to the vehicle.</p> <p><u>PUMP PANEL TRIM PLATES</u></p> <p>A high polished trim plate shall be provided around each discharge port and suction inlet opening to allow accessibility to the respective valve for service and repairs.</p> <p><u>DISCHARGE GAUGE TRIM BEZELS</u></p> <p>Each individual discharge gauge shall be installed into a decorative chrome-plated mounting bezel that incorporates valve-identifying verbiage and color labels.</p> <p><u>COLOR CODED IDENTIFICATION TAGS</u></p> <p>Color coded identification tags shall be provided for all gauges, controls, connections, switches, inlets and outlets.</p> <p><u>PUMP OPERATOR'S PANEL LIGHT SHIELD</u></p> <p>The pump operator's panel shall be equipped with a light shield that shall be full width of the control panel, and shall be positioned to cover the lights and prevent glare.</p> <p>The light shield shall be equipped with the following lights:</p> <ul style="list-style-type: none"> • Three (3) 20" Amdor Luma Bar H2O super bright led strip lights. <p>One (1) light under the operator's panel light shield shall be actuated when fire pump is engaged in addition to the pump engaged light.</p> <p><u>DRIVER SIDE PUMP PANEL LIGHTING</u></p> <p>The driver side pump panel and running board shall be illuminated by the following lights:</p> <ul style="list-style-type: none"> • Four (4) TecNiq Eon, 3-LED illumination lights mounted in horizontal stainless steel bezels and mounting gaskets. <p>The lights shall be switched with the top mount panel lights.</p>		
COMMERCIAL PUMPER SPECIFICATIONS		

UNION COUNTY FIRE DEPARTMENT	Bidder Complies	
	Yes	No
<p><u>TOP MOUNT WALKWAY LIGHTING</u></p> <p>The top mount walkway shall be illuminated by the following lights:</p> <ul style="list-style-type: none"> Four (4) TecNiq Eon, 3-LED illumination lights mounted in horizontal stainless steel bezels and mounting gaskets. <p>The lights shall be controlled with the marker lights.</p> <p><u>OFFICER SIDE PUMP PANEL LIGHTING</u></p> <p>The officer side pump panel and running board shall be illuminated by the following lights:</p> <ul style="list-style-type: none"> Four (4) TecNiq Eon, 3-LED illumination lights mounted in horizontal stainless steel bezels and mounting gaskets. <p>The lights shall be switched with the top mount panel lights.</p> <p><u>PUMP OPERATOR'S PANEL</u></p> <p>Particular attention is to be given to functional arrangement of all controls. The pump operator's panel shall accommodate the following:</p> <ul style="list-style-type: none"> Hinged gauge panel Water tank fill valve Auxiliary suction valve control All discharge valve controls Auxiliary engine cooler controls Water tank suction control valve Pump primer valve Engine throttle control Master compound vacuum gauge Master pressure gauge Individual discharge gauges Pump shift engaged indicator light Water tank water level indicator Engine tachometer Engine oil pressure gauge with audible alarm Engine water temperature gauge with audible alarm Low voltage light and audible alarm Pump panel light switch Speed counter (Underwriters) Pump performance plate (Underwriters) Pump serial No. plate Master pump drain valve Individual drains Voltmeter Air inlet/outlet at lower driver side panel Hourmeter (Pump Hours). Pump panel air horn actuation button labeled "EVACUATION" in white letters with a red background. 3/4" Pump cooler (By-pass Line). Class One "Captain" pressure governor control 		
COMMERCIAL PUMPER SPECIFICATIONS		

<div> <div>UNION COUNTY FIRE DEPARTMENT</div> </div>	Bidder Complies	
	Yes	No
<p><u>PUMP TEST PORTS</u></p> <p>The pump panel shall be equipped with Vacuum & Pressure test plugs to allow for test equipment to monitor pump pressure and vacuum levels. Chrome plugs and labels shall be provided for the test ports.</p> <p><u>MASTER GAUGES</u></p> <p>One (1) 4" diameter pressure gauge (labeled: "PRESSURE") and one (1) 4" diameter compound vacuum gauge (labeled: "INTAKE") shall be provided. The master gauges shall be Innovative Controls glycerin filled. The gauge faces shall be white with black numerals.</p> <p><u>PRESSURE & COMPOUND GAUGE RANGES</u></p> <p>All applicable pressure gauges shall have a range of 0 - 400 P.S.I., and the compound gauge shall have a range of -30" - 0 - 400 P.S.I.</p> <p><u>CLASS 1 ENFO IV ENGINE STATUS SYSTEM</u></p> <p>A Class 1 "ENFO IV" display head shall be provided for the SAE J1939 engine, to display the engine oil pressure, engine water temperature, engine RPM and chassis volt meter functions. The display head shall include the required NFPA warning lights and alarms.</p> <p><u>ENGINE COOLER</u></p> <p>An auxiliary cooler or heat exchanger shall be installed in the engine compartment between the engine and the chassis radiator. The cooler shall permit the use of water from the pump for cooling the engine. The cooling shall be done without mixing engine and pump water.</p> <p><u>TANK LEVEL GAUGE</u></p> <p>An Innovative Controls model #3030358, Ultra-Bright LED water level monitor shall be provided on the pump operator's panel. The level gauge shall contain ten (10) high intensity LED's on the display in a vertical pattern allowing the full, 3/4, 1/2, 1/4 and refill levels to be easily distinguished at a glance. The display shall use a two-dimensional, two-element lens to refract the light from the LED's to provide full 180° visibility for the level indications.</p> <p>The gauge shall use a pressure transducer #3030376-01 installed near the bottom of the water tank to determine the correct volume in the tank.</p> <p><u>WATER TANK</u></p> <p>The water tank shall have a capacity of 1000 gallons, constructed from Poly material.</p> <p><u>WATER TANK CONSTRUCTION</u></p> <p>The Poly water tank shall be constructed of PT3 polypropylene material. This material shall be a non-corrosive stress relieved thermoplastic and UV stabilized for maximum protection. Tank shell thickness may vary depending on the application and may range from 1/2 to 1" as required. Internal baffles are generally 3/8" in thickness.</p> <p>The tank shall be of a specific configuration and is so designed to be completely independent of the body and compartments. Joints and seams shall be fused using nitrogen gas as required and tested for maximum strength and integrity. The tank construction shall include PolyProSeal technology wherein a sealant shall be installed between the plastic components prior to being fusion welded. This sealing method will provide a liquid barrier offering leak protection in the event of a weld compromise. The top of the booster tank is fitted with removable lifting assembly designed to facilitate tank removal.</p>		
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<div> <div>UNION COUNTY FIRE DEPARTMENT</div> </div>	Bidder Complies	
	Yes	No
<p>The transverse and longitudinal swash partitions shall be manufactured of a minimum of 3/8" PT3 polypropylene. All partitions shall be equipped with vent and air holes to permit movement of air and water between compartments. The partitions shall be designed to provide maximum water flow. All swash partitions interlock with one another and are completely fused to each other as well as to the walls of the tank. All partitions and spacing shall comply with NFPA 1901. The walls shall be welded to the floor of the tank providing maximum strength as part of the tank's unique Full Floor Design. Tolerances in design allow for a maximum variation of 1/8" on all dimensions.</p> <p><u>WATER CAPACITY CERTIFICATION</u></p> <p>All tanks shall be tested and certified as to capacity on a calibrated and certified tilting scale. Each tank shall be weighed empty and full to provide precise fluid capacity. Each Poly-Tank's III is delivered with a Certificate of Capacity delineating the weight empty and full and the resultant capacity based on weight.</p> <p><u>WATER TANKNOLOGY TAG</u></p> <p>A tag shall be installed on the apparatus in a convenient location and contain pertinent information including a QR code readable by commercially available smart phones. The information contained on the tag shall include the capacity of the water and foam (s), the maximum fill and pressure rates, the serial number of the tank, the date of manufacture, the tank manufacturer, and contact information. The QR code will allow the user to connect with the tank manufacturer for additional information and assistance.</p> <p><u>WATER TANK ISO CERTIFICATION</u></p> <p>The tank must be designed and fabricated by a tank manufacturer that is ISO 9001:2000 certified in each of its locations. The ISO certification must be to the current standard in effect at the time of the design and fabrication of the tank.</p> <p><u>WATER TANK LID</u></p> <p>The tank cover shall be constructed of 1/2" thick PT3 polypropylene and UV stabilized, to incorporate a multi-piece locking design, which allows for individual removal and inspection if necessary. The tank cover(s) shall be flush or recessed 3/8" from the top of the tank and shall be fused to the tank walls and longitudinal partitions for maximum integrity. Each one of the covers shall have hold downs consisting of 2" minimum polypropylene dowels spaced a maximum of 40" apart. These dowels shall extend through the covers and will assist in keeping the covers rigid under fast filling conditions. A minimum of two lifting dowers shall accommodate the necessary lifting hardware.</p> <p><u>WATER TANK FILL TOWER</u></p> <p>The tank shall have a combination vent and manual fill tower. The fill tower shall be constructed of 1/2" PT3 polypropylene and shall be a minimum dimension of 12" x 12" outer perimeter. The fill tower shall be blue in color indicating that it is a water-only fill tower. The tower shall be located in the left front corner of the tank unless otherwise specified by the tank manufacturer to the purchaser. The tower shall have a 1/4" thick removable polypropylene screen and a PT3 polypropylene hinged cover. The capacity of the tank shall be engraved on the top of the fill tower lid. Inside the fill tower there shall be a combination vent/overflow pipe. The vent overflow shall be a minimum of schedule 40 polypropylene pipe with a minimum I.D. of that is designed to run through the tank, and shall be piped to discharge water behind the rear wheels as required in NFPA 1901 so as to not interfere with rear tire traction.</p>		
<div>COMMERCIAL PUMPER SPECIFICATIONS</div>		

UNION COUNTY FIRE DEPARTMENT	Bidder Complies	
	Yes	No
<p><u>WATER TANK OVERFLOW AND VENT PIPE</u></p> <p>The fill tower shall be fitted with an integral 4" I.D. schedule 40 P.V.C. combination overflow/vent pipe running from the fill tower through the tank to a 4" coupling flush mounted into the bottom of the tank to allow water to overflow behind the chassis rear axle.</p> <p><u>WATER TANK SUMP</u></p> <p>The tank sump shall be a minimum of 10" wide x 10" long x 3" deep. An anti-swirl plate shall be mounted inside the sump, approximately 1" above the bottom of the sump.</p> <p><u>WATER TANK 3" SUMP DRAIN</u></p> <p>A 3" drain plug shall be provided.</p> <p><u>WATER TANK FLANGES/OUTLETS - PUMPER</u></p> <p>There shall be two (2) standard tank outlets; one for tank-to-pump suction line which shall be a minimum of 4" coupling and one for a tank fill line which shall be a minimum of a 2" NPT coupling. All tank fill couplings shall be backed with flow deflectors to break up the stream of water entering the tank.</p> <p><u>WATER TANK MOUNTING ALL "T" TANKS - PUMPER</u></p> <p>The tank shall rest on the body cross members spaced a maximum of 22" apart, and shall be insulated from these cross members with a minimum of 3/8" nylon webbing or 1/2" rubber, 2-1/2" wide. The tank shall sit cradle-mounted using four (4) corner angles of 6 x 6 x 4 x 0.250 welded directly to the body cross members. The angles shall keep the tank from shifting left to right or front to rear. The tank is designed on the free-floating suspension principle and shall not require the use of hold downs. The tank shall be completely removable without disturbing or dismantling the apparatus body structure. The body or hose bed cross braces shall act as water tank retainers.</p> <p><u>APPARATUS BODY DESIGN CONSTRUCTION</u></p> <p>The body side and compartment assemblies shall be designed and assembled to provide maximum strength and durability under all operating conditions.</p> <p>Special attention shall be taken to minimize corrosion on all fabricated parts and structural members of the body. All bolt-on components shall be provided with a dissimilar metals isolation barrier to prevent electric corrosion. The body design shall also incorporate removable panels to access spring hangers, rear body mounts and fuel tank sending units.</p> <p>The body assembly shall be an all-welded configuration. The body shall be completely isolated from the cab and pump module structure.</p> <p>Dimensions used in this specification shall be the general outer dimension taken from a typical line diagram of the apparatus. These dimensions shall not take into account items like material thickness, access panels, doors, and other installed options.</p> <p><u>COMPARTMENT TOPS</u></p> <p>Compartment ceilings shall be a fully welded design as part of the body construction process. Compartment designs that do not have a welded in ceiling and utilize the stepping surface overlay as the ceiling shall not be acceptable.</p> <p>The top of the welded in compartment ceiling shall be overlaid with aluminum treadplate to provide an NFPA compliant stepping surface.</p>		
COMMERCIAL PUMPER SPECIFICATIONS		

UNION COUNTY FIRE DEPARTMENT	Bidder Complies	
	Yes	No
<p><u>COMPARTMENT DRIP MOLDING</u></p> <p>Compartment tops over all side compartments shall have a flange formed to provide protection against water runoff. For bodies with wide hose beds or coffin compartments a secondary extruded drop molding shall be provided above the compartments.</p> <p><u>REAR BODY PANEL</u></p> <p>The rear body panel shall extend the full width between the body side compartments. This panel shall be full height from the rear step to the hose bed floor. No part of the rear panel shall be attached to the booster tank. The rear body panel material shall be aluminum treadplate as standard. If Chevron striping is specified for the rear of the body then smooth aluminum shall be utilized.</p> <p><u>BODY AND COMPARTMENT FABRICATION - GALVANNEAL STEEL</u></p> <p>The body shall be assembled in fixtures to ensure accurate body dimensions and door openings. The parts used in the construction of the body weldment shall be fabricated from the highest Grade 12 gauge galvalume steel (ASTM A653) with a coating weight of A-60. After proper alignment is achieved, the body panels shall be spot-welded together to ensure proper weld penetration and then stitch-welded on all exposed seams to minimize distortion of welded assemblies. A full seam weld shall not be used due to the applied heat which shall distort sheet metal and remove the protective coating from the perimeter of the welded area. All seams shall be caulked prior to finish paint to ensure proper compartment seal.</p> <p><u>BODY SUB STRUCTURE - STEEL</u></p> <p>The body sub structure shall be an all welded configuration utilizing a combination of 3" x 1-1/2" A500 Gr. B structural tubing and A36 structural channel.</p> <p>The sub structure shall be designed to totally support the full length and width of the body. The structure shall be welded to the body side compartments to incorporate the compartments into an integral part of the body weldment.</p> <p>All cross tubes of the structure shall be capped and butt welded at their point of termination to prevent water from lying inside the super structure. The super structure shall be bolted to the sides of the chassis frame at four (4) points. The two (2) forward mounting points shall utilize a spring mount to help isolate the body from chassis deflection.</p> <p>This design shall provide storage capacity in each side compartment for a minimum of 500 lbs of equipment, and a minimum of 1000 lbs of equipment in the rear step compartment.</p> <p><u>FIRE BODY WIDTH</u></p> <p>The fire body shall be 100" wide to provide the maximum amount of usable hose bed and compartment space. The side body compartments shall be 29" deep in any full depth areas, and 14" deep in any split depth areas.</p> <p><u>BODY FENDER</u></p> <p>The body fender shall be 64" long, this shall allow for the suspension and related components to be contained within the fender, preventing any intrusion into the body compartment storage area. Bodies with notches in the front and/or rear compartment for suspension components are not acceptable.</p>		
COMMERCIAL PUMPER SPECIFICATIONS		

UNION COUNTY FIRE DEPARTMENT	Bidder Complies	
	Yes	No
<p><u>DRIVER SIDE - FRONT SECTION OF FENDER</u></p> <p>A storage compartment shall be inserted into the fender to provide a storage area for three (3) customer supplied SCBA cylinders (or fire extinguishers of similar size). The storage area shall be sized as tall and wide as possible in the fender (minimum of 14" wide x 15" tall with an angled floor by fender radius), and shall be 26" deep. The compartment shall have a non-abrasive lined cradle storage area for each of the three (3) devices.</p> <p>This storage compartment shall provide a minimum of 2.3 cubic feet of storage space.</p> <p><u>DRIVER SIDE - REAR SECTION OF FENDER</u></p> <p>No storage compartment has been specified for this position.</p> <p><u>OFFICER SIDE - FRONT SECTION OF FENDER</u></p> <p>A storage compartment shall be inserted into the fender to provide a storage area for three (3) customer supplied SCBA cylinders (or fire extinguishers of similar size). The storage area shall be sized as tall and wide as possible in the fender (minimum of 14" wide x 15" tall with an angled floor by fender radius), and shall be 26" deep. The compartment shall have a non-abrasive lined cradle storage area for each of the three (3) devices.</p> <p>This storage compartment shall provide a minimum of 2.3 cubic feet of storage space.</p> <p><u>OFFICER SIDE - REAR SECTION OF FENDER</u></p> <p>No storage compartment has been specified for this position.</p> <p><u>FENDER STORAGE DOORS</u></p> <p>The fender storage area(s) shall be enclosed by a hinged door fabricated from the same material as the primary body construction, and painted the primary body color. The back side of the door shall have a section of Nylatron installed to protect the door surface from the items stored in the compartment. Each door shall be tied into the compartment door ajar/do not move apparatus warning system.</p> <p><u>DRIVER SIDE BODY COMPARTMENTATION</u></p> <p>One full height/full depth compartment shall be provided forward of the rear wheels. The compartment dimensions shall be 35" wide x 68" tall x 29" deep.</p> <p>One high side compartment shall be provided above the rear wheels. The compartment dimensions shall be 64" wide x 37" high x 29" deep.</p> <p>One full height/full depth compartment shall be provided behind the rear wheels. The compartment dimensions shall be 56" wide x 68" tall x 29" deep.</p> <p>The driver side compartments shall provide approximately 144 cubic feet of storage space.</p> <p><u>OFFICER SIDE BODY COMPARTMENTATION</u></p> <p>One low side compartment shall be provided forward of the rear wheels. The compartment dimensions shall be 35" wide x 32" tall x 29" deep.</p> <p>One low side compartment shall be provided behind the rear wheels. The compartment dimensions shall be 56" wide x 32" tall x 29" deep.</p>		
COMMERCIAL PUMPER SPECIFICATIONS		

UNION COUNTY FIRE DEPARTMENT	Bidder Complies	
	Yes	No
<p>One high side compartment shall be provided above the lower compartments and the rear wheels. This compartment shall be the full length of the body with dimensions of 37" high x 158" wide x 14" deep. There shall be three (3) door openings to access this storage area, equally sized.</p> <p>The officer side compartments shall provide approximately 96 cubic feet of storage space.</p> <p><u>REAR STEP COMPARTMENT</u></p> <p>An equipment storage compartment shall be provided on the rear of the body at the rear step area. The rear step compartment shall be 42" Wide x 40" High x 29" Deep.</p> <p>The rear step compartment shall provide approximately 28 cubic feet of storage space.</p> <p>The rear step compartment shall have full side panels which shall isolate this storage area from the side body compartments.</p> <p>The rear step compartment shall be equipped with a hinged style compartment door. The door shall be a double door configuration. The standard finish shall be aluminum treadplate to match the balance of the rear body panel. On apparatus where this area is specified to be overlaid with Chevron striping, the material shall be flat aluminum overlaid with Chevron striping.</p> <p><u>EXTENDED REAR STEP - SQUARE CORNERS</u></p> <p>The extended rear step shall be 12" deep, extended beyond the body compartments. The step shall be 100" wide, with square corners. The step shall be fabricated from 3/16" polished aluminum treadplate, and shall be rigidly reinforced.</p> <p>The rear edge of the step shall be designed to accommodate the rear clearance lights, recessed for protection in the step reinforcement channel. The step shall be bolted into place with a minimum 1/2" clearance gap between the step and rear body panel.</p> <p><u>HOSE BED (72" WIDE)</u></p> <p>The hose bed shall be located directly above the booster tank and shall be free from all sharp objects such as bolts, nuts, etc., to avoid damage to fire hose.</p> <p>For added strength, the hose bed side walls shall be approximately 2" thick, this shall provide a mounting surface for devices like warning lights and scene lights. The inner hosebed side walls shall be brushed aluminum panels, which shall prevent damage to painted surfaces when deploying hose. The front wall shall be flanged inward 2" with a 1" downward return to provide additional rigidity to the front wall.</p> <p><u>HOSE BED CAPACITY</u></p> <p>The hose bed shall be designed with enough storage capacity to carry the following customer specified hose load:</p> <ul style="list-style-type: none"> • 1100 Feet of 3" supply hose <p><u>HOSE BED FLOORING</u></p> <p>Flooring is to be constructed from extruded aluminum and be properly spaced for ventilation. The flooring shall be smooth and free from sharp edges to avoid hose damage. The hose bed floor shall be removable to provide access to inner body framework.</p>		
COMMERCIAL PUMPER SPECIFICATIONS		

UNION COUNTY FIRE DEPARTMENT		Bidder Complies	
		Yes	No
<p><u>HOSE BED PARTITION</u></p> <p>No hosebed partitions have been specified for the hose storage area.</p> <p><u>VINYL HOSE BED COVER - 1/4 TURN FASTENERS</u></p> <p>A hose bed cover shall be provided and installed. The cover shall be made from 22 ounce; heavy-duty vinyl coated polyester fabric (TXN 226). The cover shall be sewn with ultraviolet resistant thread and shall have 2" wide nylon webbing sewn around the perimeter to provide additional strength.</p> <p>The cover shall be secured to the top front body flange with quarter-turn fasteners. The cover shall be secured to the side body flanges with quarter-turn fasteners. A weighted flap shall be furnished on the rear of the cover with two (2) bungee cords.</p> <p>The Hypalon material shall be red in color.</p> <p><u>COMPARTMENT DOORS</u></p> <p>The compartment doors shall be flush type with the outer skin fabricated from 3/16" (5052 H32) aluminum. The door skin shall have a formed flange on one (1) side used as a hinge mounting flange. The door skin shall have reinforcing channels welded internally which accommodate the inner door pan mounting.</p> <p>The 2" thick compartment doors shall reduce the overall specified compartment depth by 2".</p> <p>All horizontally hinged doors shall be 1" thick to provide additional compartment storage area. The 1" thick horizontally hinged doors shall reduce the overall specified compartment depth by 1-1/4".</p> <p>Each inner pan shall be constructed from 1/8" aluminum material, which shall be provided with a brushed finish. The brushed finish shall allow the fire department to remove scratches from the inner door pan with sand paper or scuff pad. Each inner door pan shall be fastened to the door frame channels to provide a smooth, snag-free inner door surface. The inner door pan on the running board compartments shall enclose the latch and reinforcements completely. The pan shall be easily removable to access the enclosed latch mechanism.</p> <p><u>COMPARTMENT DOOR HINGES</u></p> <p>Hinges shall be full length polished stainless steel piano type. The hinges shall be mounted with stainless steel hardware.</p> <p><u>COMPARTMENT DOOR SEALS</u></p> <p>Enclosed body compartment doors shall be equipped with a closed cell gasket. The gasket material shall be EPDM to provide a gasket resistant to weather, temperature extremes, and aging.</p> <p><u>COMPARTMENT DOOR LATCHES – ROTARY WITH D-RINGS</u></p> <p>Externally latched body doors shall be equipped with stainless steel D-ring handles.</p> <p>Rotary door latches shall be provided for all full height body doors, which shall incorporate rotary latches at the top and bottom of all externally latched single or double doors. Linkages shall be provided between the actuation handle and the latch mechanisms.</p> <p>The blank door of a double door configuration shall have rotary latches at the top and bottom of each door with the latch release lever accessible thru the door frame, which eliminates the need to reach inside the compartment to release the door. Linkages shall be provided between the actuation handle and the latch mechanisms.</p>			
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<div> <div>UNION COUNTY FIRE DEPARTMENT</div> </div>	Bidder Complies	
	Yes	No
<p>Horizontally hinged doors shall be equipped with a single rotary door latch.</p> <p><u>COMPARTMENT DOOR STAY ARMS</u></p> <p>Eberhard gas shock type door hold open devices shall be provided for each vertically and horizontally hinged door.</p> <p><u>SWEEP-OUT COMPARTMENT FLOORS</u></p> <p>Compartment floors shall be welded to the compartment walls and have a sweep out design for easy cleaning.</p> <p>Compartment with hinged doors shall have the door opening flanges bend down to produce the sweep-out design.</p> <p>Compartment with roll-up style doors shall have the external floor flange stepped down, 1/2" high x 2" deep, to produce a sealing surface for the roll-up doors below the compartment floor. The sweep out design shall also permit easy cleaning.</p> <p><u>COATED FASTENERS</u></p> <p>All exterior fasteners shall be coated stainless steel screws. Screw threads shall be coated with reusable, self-locking, sealing material to provide vibration resistance. Screw heads shall be coated with a sealing element to prevent galvanic corrosion between dissimilar metals. Non-coated screws shall only be provided as part of vendor supplied component installations.</p> <p><u>COMPARTMENT LOUVERS</u></p> <p>Ventilation between compartments to atmosphere shall be provided and located to avoid water entry into compartments.</p> <p><u>ACCESS PANELS</u></p> <p>Removable access panels shall be provided (if applicable) to access fuel tank sender, electrical junction compartment and rear body mounts.</p> <p>Protective panels shall be located in the rear compartments providing access to the lights and associated wiring. The covers shall also serve as protective covers to prevent inadvertent damage to lights or wiring from tools or equipment located in the compartment.</p> <p><u>BODY PROTECTION PANELS</u></p> <p>The front face of the side compartments, next to the driver and officer side pump panels shall be overlaid with aluminum tread plate full height protection. The protection panel shall cover the entire front face of the compartment and shall wrap around the corner to the door opening.</p> <p><u>BODY RUB RAILS</u></p> <p>Sacrificial aluminum tread plate rub rails shall be mounted at the base of the body, extend outward a minimum 3/4", downward 2" and flange inward 1". The rub rails shall extend the full length of the main body and wrap around the rear body corners. Rub rails shall be designed to bolt to the body from the bottom side of the compartment area, so as not to damage the body side panels on initial impact and to provide for ease of replacement.</p>		
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	Yes	No
<p><u>RUNNING BOARD STEPS</u></p> <p>The driver and officer running board steps shall be fabricated of 3/16" polished aluminum tread plate. The outside edge on each step shall be fabricated with a double break, return flange. The steps shall be rigidly reinforced with a heavy duty support structure. The running boards shall not form any part of the compartment design, and shall be bolted into place with a minimum 1/2" clearance gap between any panel to facilitate water runoff.</p> <p><u>GRAB RAILS</u></p> <p>All hand rails shall be 1-1/4" outer diameter, knurled bright anodized aluminum extrusion, designed to meet NFPA 1901 requirements.</p> <p>Molded gaskets shall be installed between the handrail stanchion castings and body surfaces to prevent electrolytic reaction between dissimilar metals and to protect paint.</p> <p><u>GRAB RAIL LOCATIONS:</u></p> <p>Grab rails shall be provided at the following specified locations. Additional grab rails shall be provided adjacent to any additional steps specified to comply with NFPA 1901.</p> <p>Two (2) vertical rails shall be mounted on the rear edge of the beavertails, one (1) each side.</p> <p>One (1) horizontal, full width handrail shall be installed on the rear, below the level of the hose bed.</p> <p><u>FOLDING STEP(S)- BODY REAR DRIVER SIDE</u></p> <p>Austin Hardware model FS-200 CHR large folding step(s), made of high strength die cast aluminum, with a textured chrome plate finish, shall be provided on driver side body rear to provide NFPA compliant access (maximum 18" height between steps) to an upper horizontal walking surface (compartment cap, dunnage area, fabricated step, or upper body compartments).</p> <p><u>FOLDING STEP(S) - BODY REAR OFFICER SIDE</u></p> <p>Austin Hardware model FS-200 CHR large folding step(s), made of high strength die cast aluminum, with a textured chrome plate finish, shall be provided on officer side body rear to provide NFPA compliant access (maximum 18" height between steps) to an upper horizontal walking surface (compartment cap, dunnage area, fabricated step, or upper body compartments).</p> <p><u>SAFETY SIGN(S) AT REAR STEP AND CROSS WALKWAY(S)</u></p> <p>Safety sign(s) shall be located on the vehicle at the rear step, and at any cross walkway(s), to warn personnel that riding in or on these areas while the vehicle is in motion is prohibited.</p> <p><u>REAR WHEEL WELL LINERS</u></p> <p>Fully removable, one piece, bolt-in, aluminum rear wheel well liner and fenderette will be provided. The wheel well liners will be natural metal finish and will protect the front and rear compartments and main body supports from damage. Wheel well liners and fenderettes which are welded in place or are only partially removable shall not be considered.</p> <p><u>REAR MUD FLAPS</u></p> <p>Heavy duty mud flaps shall be provided behind the rear wheels.</p>		
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	Yes	No
<p><u>REAR TOW EYES</u></p> <p>Two (2) painted tow eyes shall be furnished on the rear of the vehicle. The tow eyes shall be made from plate steel and shall be bolted directly to the chassis frame rails with grade 8 bolts and shall extend below the body. The tow eyes shall be smooth and free from sharp edges, and have a minimum eyelet hole of 2-1/2". The tow eyes shall be painted.</p> <p>**** COMPARTMENT ACCESSORIES ****</p> <p><u>ADJUSTABLE SHELVING</u></p> <p>Compartment shelving shall be constructed of 3/16" brush finish aluminum with a 2" upward bend at front and rear, and side supports. Shelving shall be vertically adjustable with spring nuts in aluminum strut channel.</p> <p>Adjustable shelves shall be located as follows:</p> <p>One (1) in the driver side front compartment</p> <p>Two (2) in the driver side rear compartment</p> <p><u>SLIDE OUT FLOOR MOUNT SHELVING</u></p> <p>Slide out floor mount compartment shelving shall be constructed of 3/16" brush finish aluminum with a 2" upward bend at front and rear, and side supports attached to #250 rated slides. Slide out floor mount shelving shall have gas shocks to hold the tray in and out.</p> <p>Slide out floor mount shelving shall be provided as follows:</p> <p>One (1) in the driver side rear compartment</p> <p><u>ROLL-OUT/ DROP DOWN TRAYS</u></p> <p>The roll out/tilt tray shall consist of a 3/16" brushed aluminum finished aluminum tray with a minimum 2" lip on all four sides. Heavy duty aluminum Unistrut "C" channel tracking material shall be utilized to securely fasten the slide tracks to the compartment walls, while allowing height adjustment.</p> <p>The slide mechanism shall consist of a low-weight high-strength plastic to create a robust front bracket to support the aluminum tray. The rear of the tip down tray shall be mounted on a slider with an integral pivot plate. This slider and pivot plate shall be mounted inside an aluminum rail for maximum strength. The tray shall be released from the stowed position with the use of a push button and shall be capable of auto latching to the stowed position. The front handle/latch shall be designed with a double hand hold to control the tray when deployed or stowed. The roll out/tilt tray shall be rated for 330# capacity.</p> <p>Roll out/Tilt trays will be located as follows:</p> <p>One (1) in the driver side rear high side compartment</p> <p>One (1) in the driver side over the wheel high side compartment</p> <p><u>LADDER STORAGE</u></p> <p>The ground ladders shall be stored vertically next to the water tank, behind the side body compartments, on the officer side of the apparatus.</p>		
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	Yes	No
<p>To secure the ground ladders, a hinged rear access door shall be provided and tied into the "Do Not Move Apparatus" warning system.</p> <p><u>GROUND LADDERS</u></p> <p>The following Alco-Lite ground ladder complement shall be provided:</p> <ul style="list-style-type: none"> One (1) Alco-Lite model PEL-24; 24', aluminum, two (2) section extension ladder shall be provided. One (1) Alco-Lite model PRL-14; 14', aluminum, straight roof ladder with folding hooks shall be provided. One (1) Alco-Lite model FL-10; 10', folding, aluminum, attic ladder shall be provided. <p>**** PIKE POLES AND HOLDERS ****</p> <p><u>PIKE POLE STORAGE</u></p> <p>Two (2) pike pole tube(s) shall be provided. Each holder shall be accessible from the rear of the apparatus. Each pike pole holder shall be labeled to indicate the pike pole length.</p> <p>The pike pole tube(s) shall be mounted in the ladder storage compartment.</p> <ul style="list-style-type: none"> One (1) 8' Fire Hooks Unlimited fiberglass handled pike pole(s) shall be provided. One (1) 14' Fire Hooks Unlimited fiberglass handled pike pole(s) shall be provided. <p><u>SUCTION HOSE STORAGE</u></p> <p>The suction hoses shall be located on the body side panels, one (1) on the officer side and one (1) on the driver side of the apparatus.</p> <p><u>HOSE TROUGH</u></p> <p>Two (2) polished, extruded aluminum adjustable hose trough(s) shall be provided to accommodate the suction hoses. Two (2) Velcro hose holders shall be furnished on each trough.</p> <p><u>SUCTION HOSE</u></p> <p>Two (2) 10 foot sections of six (6) inch PVC lightweight suction hose shall be furnished (Kochek or Firequip Maxi-Flex). Suction hose shall be for suction only and not to be used on pressurized hydrants or for relay pumping. Couplings shall include a long handle, female swivel on one end and a rocker lug male on the other end. All threads shall be six (6) inch N.S.T.</p> <p>NOTE: All PVC suction hoses are strictly drafting hoses and must not be used on hydrants or in pressure applications, as serious personal injury or death may occur.</p> <p><u>STRAINER</u></p> <p>One (1) 6" NST barrel type strainer(s) shall be provided to attach to the suction hose. A compartment mounting bracket shall also be provided to store the strainer(s) when not in use.</p> <p><u>HYDRANT ADAPTER</u></p> <p>A double female swivel hydrant adapter shall be provided along with a screw base mounting bracket. One end shall attach to the suction hose and the other end to be 4-1/2" N.S.T. thread.</p>		
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**Bidder
Complies**

Yes No

ADDITIONAL ITEMS SUPPLIED WITH THE VEHICLE

- 1 - Pint of touch up paint for each color
- 1 -Bag of assorted stainless steel nuts and bolts

LOOSE EQUIPMENT

The following items shall be provided and shipped loose with the completed apparatus at the time of delivery:

WHEEL CHOCKS

The NFPA required wheel chocks shall not be supplied or installed with the apparatus from the OEM. The customer shall be responsible for providing the required wheel chocks after accepting delivery of the apparatus.

****** PAINT SECTION ******

PAINT, PREPARATION AND FINISH

The PPG Delta, Low V.O.C., polyurethane finishing system, or equal, shall be utilized. A "Clear Coat" paint finish shall be supplied to provide greater protection to the quality of the exterior paint finish.

All removable items, such as brackets, compartment doors, etc. shall be painted separately to insure finish paint behind mounted items. All compartment unwelded seams exposed to high moisture environments shall be sealed using permanent pliable caulking prior to finish paint.

BODY PRIMER & PREPARATION

All exposed welds shall be ground smooth for final finishing of areas to be painted. The compartments and doors are totally degreased and phosphatized. After final body work is completed, grinding (36 and 80 grit), and finish sanding shall be used in preparation for priming.

BODY FINISH PAINT

The body shall be finish sanded and prepared for final paint. Upon completion of final preparation, the body shall be painted utilizing the highest quality, state of the art, low V.O.C., polyurethane base paint. Finish paint shall be applied in multiple coats to ensure proper paint coverage with a high gloss finish.

The entire body shall be buffed and detailed.

BODY PAINT

The inside and underside areas of the complete body assembly shall be painted black using a PPG Delta System, prior to the installation of the body on the chassis or torque box.

COMPARTMENT PAINT

The interior of the compartments shall be finish painted job color with a scuff resistant webbing type paint of a contrasting color applied over the painted surfaces.

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		Yes	No
<p><u>BODY PAINT</u></p> <p>The body paint finish shall be PPG Delta System in a single color, to match customer furnished paint codes and requirements.</p> <p><u>PUMP / PIPING PAINT</u></p> <p>The pump enclosure and pump/plumbing within the pump enclosure shall be painted black.</p> <p><u>FENDER STORAGE COMPARTMENT PAINT</u></p> <p>The interior of the fender storage compartments (if fender compartments are specified) shall be finish painted job color.</p> <p><u>CHASSIS CAB PAINT</u></p> <p>The commercial cab exterior shall be finish painted in a two tone color scheme by the chassis manufacturer with Purchaser's choice of color as available.</p> <p>Paint codes shall match PPG #2185 white and PPG #71528 red.</p> <p><u>COMMERCIAL CAB PAINT FINISH GUIDELINES</u></p> <p>The chassis shall be painted and detailed as provided from the chassis OEM and shall meet their quality guidelines.</p> <p><u>WHEEL PAINT</u></p> <p>The chassis wheels shall be painted as provided by the commercial chassis manufacturer.</p> <p><u>TOUCH-UP PAINT</u></p> <p>One (1) pint of each, exterior, color paint for touch-up purposes shall be supplied when the apparatus is delivered to the end user.</p> <p><u>FINALIZATION & DETAILING</u></p> <p>Prior to delivery of the vehicle, the interior and exterior be cleaned and detailed. The finalization process detailing shall include installation of NFPA required labels, checking fluid levels, sealing and caulking required areas of the cab and body, rust proofing, paint touch-up, etc.</p> <p><u>RUST PROOFING</u></p> <p>The entire unit shall be thoroughly rust proofed utilizing rustproof and sound deadening materials applied in manufacturer recommended application procedures. Rust proofing shall be applied during the assembly process and upon completion to insure proper coverage in all critical areas.</p> <p>**** LETTERING AND STRIPING ****</p> <p><u>LETTERING</u></p> <p>Lettering shall not be provided anywhere on the apparatus.</p>			
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Bidder
Complies

Yes No

**** NFPA REQUIRED SCOTCH-LITE STRIPING ****

SCOTCH-LITE STRIPE

A four (4) inch high "Scotch-Lite" stripe shall be provided. The stripe shall be applied on a minimum of 60 percent of each side of the unit, 60 percent on the rear of the unit and 40 percent on the front of the unit. The Scotch-Lite stripe layout shall be determined by the Fire Department.

The Scotch-Lite shall be white in color.

REAR CHEVRON STRIPING

At least 50% of the rear facing vertical surface shall be covered with alternating strips of reflective striping.

The striping shall be 6" Diamond Grade Scotch-Lite.

The Diamond Grade Scotch-Lite shall be Red and Fluorescent Yellow Green in color.

***** WARRANTIES & REQUIRED INFORMATION *****

KENWORTH WARRANTY

THIS VEHICLE WARRANTY SCHEDULE APPLIES ONLY TO ORIGINAL FACTORY EQUIPMENT AND IS SUBJECT TO THE TERMS AND LIMITATIONS IN THE ATTACHED LIMITED WARRANTY AGREEMENT. Pursuant to the terms of the attached Limited Warranty Agreement, Kenworth Truck Company will pay warranty claims for Warrantable Failures within the following maximum limits in time or mileage, **whichever shall occur first**. The Warrantable Failure must be brought to the attention of an Authorized Dealer within 30 days of discovery.

	MONTHS	MILES
Basic Vehicle This coverage applies to the basic highway vehicle, except for additional coverage and warranty exclusions below.	12	Unlimited
Major Components Eaton, Meritor & Dana Spicer front axle, beam, spindles, kingpin & kingpin bushings. Eaton, Meritor & Dana Spicer rear axle, differential assembly, axle shafts & axle housing. Manual transmissions, gears, shafts, case & bell housing. Eaton auto shift. Bendix and Meritor brakes, brackets, cam shafts, spiders and slack adjusters (excludes Air Disc Brakes).	24	Unlimited
Eaton Hybrid Components Hybrid Drive Unit (HDU) with Motors and Electronic Actuator (ECU), Electronic Clutch Actuator (ECA), Power Electronic Carrier (PEC), including batteries, Inverter, Hybrid Control Module (HCM), DC/DC Converter (in Utility Application Only), Auxiliary Power Generator Kit (APG) (in Utility Application Only)	36	150,000
Frame, Gussets, Crossmembers, Cab/Hood Structure, and Cab/Hood Corrosion Frame rails, gussets, and crossmembers. Structural components of the cab and hood. Cab and hood perforation caused by corrosion from within.	36	Unlimited

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**Bidder
Complies**

Yes No

This warranty does not apply to corrosion caused by damage to a cab panel or to finish paint.		
Other Coverage		
PACCAR Batteries	12	Unlimited
Gaskets and Wheel Seals	12	50,000
Cab and Hood Paint	12	100,000
Frame Paint—Black Only	12	100,000
Frame Paint—All colors other than black	6	50,000
Frame Paint—Logger mixer, Dump, Refuse, Oil Field & Construction applications	3	25,000
Severe Service Vehicle – All Kenworth installed components except as excluded herein. Severe Service vehicles are those operated 10% or more on class C or D roads.	12	50,000

WARRANTY - NEW PRODUCT - COMMERCIAL CHASSIS

The bidder hereby warrants to the original purchaser (first end users) that any new products shall be free from defects in material and workmanship under normal use, maintenance and service for a period of one (1) year from date of delivery, subject to the conditions and exceptions stated herein.

Under this warranty, the manufacturer's obligation is limited to the repair or replacement at their option, at its factory, by its representative, or by its authorized service facility, of any part found to be defective by the manufacturer. If the manufacturer deems it necessary, all parts for which warranty claim is made, shall be returned to the manufacturer, transportation charges prepaid, for examination by the manufacture, who will be the sole judge as to whether such part was defective in material or workmanship under normal use, maintenance or service.

WARRANTY - BODY STRUCTURE

The body shall be warranted against structural defects for a period of ten (10) years from the date of acceptance of the unit. Details of warranty coverage, limitations and exclusions are included in the specific warranty document.

WARRANTY - CORROSION

The body shall be warranted against rust-through or perforation, due to corrosion from within, for a period of ten (10) years. Perforation is defined as a condition in which an actual hole occurs in a sheet metal panel due to rust or corrosion from within. Surface rust or corrosion caused by chips or scratches in the paint is not covered by this warranty.

WARRANTY - PAINT

The paint finish will be warranted for a period of seven (7) years from the date of acceptance of the unit. Details of warranty coverage, limitations and exclusions are included in the specific warranty document.

WARRANTY - LETTERING

The apparatus manufacturer will provide a five (5) year warranty against defects in material and workmanship for all graphic processes. Any valid claims must be made in writing within 15 days of the determination of any defects to the manufacturer's fire apparatus. The manufacturer will at its option make any necessary repairs either at a local authorized service center or at the factory, if required. The manufacturer will make the final decision as to where the

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<p>repairs are to be made and any transportation cost are the owners responsibility. The manufacturer will at its option, repair or replace any verified defects in workmanship or materials at no cost to the owner provided all the requirements of this warranty have been met.</p> <p>The manufacturer will not be liable to the original purchaser or anyone else for consequential, incidental, special or direct damages, including, but not limited to, any claims for loss of profits, down time, loss of use or inconvenience. THE COMPANY MAKES NO OTHER WARRANTY, EXPRESSED OF IMPLIED, AND SPECIFICALLY, DISCLAIMS ANY IMPLIED WARRANTY INCLUDING THE WARRANTY OF MERCHANTABILITY.</p> <p>The manufacturer continually strives to improve its products and therefore, reserves the right to make improvements or changes without incurring any obligations to make such changes or additions on equipment previously sold.</p> <p><u>WARRANTY - BRIGHTWORK</u></p> <p>The manufacturer warrants all bright finish components used in the construction of their apparatus against defects and workmanship provided the apparatus is used in a normal and reasonable manner. This warranty is extended only to the original user-purchaser for a period of one (1) year from the date of delivery / acceptance to the original user-purchaser, whichever occurs first.</p> <p>The expressed warranty excludes corrosion or degradation of bright finished components caused by damage to the component.</p> <p><u>WARRANTY - STAINLESS STEEL PLUMBING WARRANTY</u></p> <p>The stainless steel plumbing shall be warranted for a period of ten (10) years from the date of acceptance of the unit. Details of warranty coverage, limitations and exclusions are included in the specific warranty document.</p> <p><u>WARRANTY - WATER TANK</u></p> <p>The water tank shall be warranted by the water tank manufacturer for the "Lifetime" of the unit. A copy of the manufacturer's warranty shall be supplied to define additional details of the warranty provisions.</p> <p><u>WARRANTY - FIRE PUMP</u></p> <p>Hale Products, Incorporated ("Hale") hereby warrants to the original buyer that products manufactured by Hale shall be free of defects in material and workmanship for a period of five (5) years from the date product is first placed into service or five and one-half (5 1/2) years from date of shipment by Hale, whichever period shall be first to expire. Within this warranty period Hale will cover parts and labor for the first two (2) years and parts only for years three (3) through five (5).</p> <p><u>WARRANTY - HEAVY DUTY VALVES</u></p> <p>Akron Brass warrants Heavy Duty Swing-Out Valves for a period of ten (10) years after purchase against defects in material or workmanship. Akron Brass shall repair or replace any Heavy Duty Swing Out Valve which fails to satisfy this warranty.</p> <p><u>NFPA REQUIRED LOOSE EQUIPMENT, PROVIDED BY FIRE DEPARTMENT</u></p> <p>The following loose equipment as outlined in NFPA 1901, 2009 edition in accordance with the applicable requirements unless supplied by the manufacturer or sales rep organization, will be provided by the fire department. All loose equipment will be installed on the apparatus before placed in emergency service, unless the fire department waives NFPA section 4.21.</p>		
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		Yes	No
<p><u>Section 5.7 Equipment</u></p> <p>It is the responsibility of the purchaser to ensure that all required equipment has been supplied and installed on the apparatus in order to achieve compliance with the standard prior to placing it in service.</p> <p>5.7.1 Ground Ladders.</p> <p>5.7.1.1 All fire department ground ladders carried on the apparatus shall meet the requirements of NFPA 1931, Standard for Manufacturer's Design of Fire Department Ground Ladders, except as permitted by 5.7.1.3 and 5.7.1.4.</p> <p>5.7.1.2 At a minimum, the following fire department ground ladders shall be carried on the apparatus:</p> <ul style="list-style-type: none"> (1) One straight ladder equipped with roof hooks (2) One extension ladder (3) One folding ladder <p>5.7.1.3 Stepladders and other types of multipurpose ladders meeting ANSI A14.2, Ladders - Portable Metal- Safety Requirements, or ANSI A14.5, Ladders - Portable Reinforced Plastic Safety Requirements, with duty ratings of Type IA or IAA shall be permitted to be substituted for the folding ladder required in 5.7.1.2(3).</p> <p>5.7.1.4 Stepladders and other types of multipurpose ladders shall be permitted to be carried in addition to the minimum fire department ground ladders specified in 5.7.1.2 provided they meet either ANSI A14.2 or ANSI A14.5 with duty ratings of Type 1A or 1AA.</p> <p><u>Section 5.7.2 Suction Hose or Supply Hose</u></p> <p>It is the responsibility of the purchaser to ensure that all required equipment has been supplied and installed on the apparatus in order to achieve compliance with the standard prior to placing it in service.</p> <p>5.7.2.1 A minimum of 20 ft (6 m) of suction hose or 15 ft (4.5 m) of supply hose shall be carried.</p> <p>5.7.2.1.1 Where suction hose is provided, a suction strainer shall be furnished.</p> <p>5.7.2.1.2 Where suction hose is provided, the friction and entrance loss of the combination suction hose and strainer shall not exceed the losses listed in Table 16.2.4.1 (b) or Table 16.2.4.1(c).</p> <p>5.7.2.1.3 Where supply hose is provided. It shall have couplings compatible with the local hydrant outlet connection on one end and the pump intake connection on the other end.</p> <p>5.7.2.2 Suction hose and supply hose shall meet the requirements of NFPA 1961, Standard on Fire Hose.</p> <p><u>Section 5.8 Minor Equipment</u></p> <p>It is the responsibility of the purchaser to ensure that all required equipment has been supplied and installed on the apparatus in order to achieve compliance with the standard prior to placing it in service.</p> <p>5.8.2 Fire Hose and Nozzles. The following fire hose and nozzles shall be carried on the apparatus:</p> <ul style="list-style-type: none"> (1) 800 ft (240 m) of 2 1/2 in. (65 mm) or larger fire hose (2) 400 ft (120 m) of 1 1/2 in. (38 mm), 1 3/4 in. (45 mm), or 2 in. (52 mm) fire hose (3) One handline nozzle. 200 gpm (750 L/min) minimum (4) Two handline nozzles. 95 gpm (360 L/min) minimum (5) One playpipe with shutoff and 1 in. (25 mm), 1 1/8 in. (29 mm), and 1 1/4 in. (32 mm) tips 			
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Complies

Yes No

5.8.3 Miscellaneous Equipment. The following additional equipment shall be carried on the apparatus:

- (1) One 6 lb (2.7 kg) flathead axe mounted in a bracket fastened to the apparatus
- (2) One 6 lb (2.7 kg) pickhead axe mounted in a bracket fastened to the apparatus
- (3) One 6 ft (2 m) pike pole or plaster hook mounted in a bracket fastened to the apparatus
- (4) One 8 ft (2.4 m) or longer pike pole mounted in a bracket fastened to the apparatus
- (5) Two portable hand lights mounted in brackets fastened to the apparatus
- (6) One approved dry chemical portable fire extinguisher with a minimum 80-B:C rating mounted in a bracket fastened to the apparatus
- (7) One 2 1/2 gal (9.5 L) or larger water extinguisher mounted in a bracket fastened to the apparatus
- (8) One self-contained breathing apparatus (SCBA) complying with NFPA 1981, Standard on Open-Circuit Self Contained Breathing Apparatus (SCBA) for Emergency Services, for each assigned seating position. But not fewer than four, mounted in brackets fastened to the apparatus or stored in containers supplied by the SCBA manufacturer
- (9) One spare SCBA cylinder for each SCBA carried, each mounted in a bracket fastened to the apparatus or stored in a specially designed storage space
- (10) One first aid kit
- (11) Four combination spanner wrenches mounted in brackets fastened to the apparatus
- (12) Two hydrant wrenches mounted in brackets fastened to the apparatus
- (13) One double female 2 1/2 in. (65 mm) adapter with National Hose (NH) threads, mounted in a bracket fastened to the apparatus
- (14) One double male 2 1/2 in. (65 mm) adapter with NH threads, mounted in a bracket fastened to the apparatus
- (15) One rubber mallet, suitable for use on suction hose connections, mounted in a bracket fastened to the apparatus
- (16) Two salvage covers each a minimum size of 12 ft x 14 ft (3.7 m x 4.3 m)
- (17) Two or more wheel chocks. Mounted in readily accessible locations, that together will hold the apparatus. When loaded to its GVWR or GCWR, on a hard surface with a 20 percent grade with the transmission in neutral and the parking brake released
- (18) One traffic vest for each seating position, each vest to comply with ANSI/ISEA 207, Standard for High-Visibility Public Safety Vests, and have a five-point breakaway feature that includes two at the shoulders, two at the sides, and one at the front
- (19) Five fluorescent orange traffic cones not less than 28 in. (711 mm) in height, each equipped with a 6 in. (152 mm) retroreflective white band no more than 4 in. (102 mm) from the top of the cone, and an additional 4 in. (102 mm) retroreflective white band 2 in. (51 mm) below the 6 in. (152 mm) band
- (20) Five illuminated warning devices such as highway flares, unless the live fluorescent orange traffic cones have illuminating capabilities
- (21) One automatic external defibrillator (AED)

5.8.3.1 If the supply hose carried does not use sexless couplings, an additional double female adapter and double male adapter, sized to fit the supply hose carried, shall be carried mounted in brackets fastened to the apparatus.

5.8.3.2 If none of the Pump intakes are valved, a hose appliance that is equipped with one or more gated intakes with female swivel connection(s) compatible with the supply hose used on one side and a swivel connection with pump intake threads on the other side shall be carried. Any intake connection larger than 3 in. (75 mm) shall include a pressure relief device that meets the requirements of 16.6.6.

5.8.3.3 If the pumper is equipped with an aerial device with a permanently mounted ladder, four ladder belts meeting the requirements of NFPA 1983, Standard on Life Safety Rope and Equipment for Emergency Services shall be provided.

5.8.3.4 If the apparatus does not have a 2 1/2 in. intake with NH threads, an adapter from 2 1/2 in. NH female to a pump intake shall be carried, mounted in a bracket fastened to the apparatus if not already mounted directly to the intake.

UNION COUNTY FIRE DEPARTMENT		Bidder Complies	
		Yes	No
<p>5.8.3.5 If the supply hose carried has other than 2 1/2 in. NH threads, adapters shall be carried to allow feeding the supply hose from a 2 1/2 in. NH thread male discharge and to allow the hose to connect to a 2 1/2 in. NH female intake, mounted in brackets fastened to the apparatus if not already mounted directly to the discharge or intake.</p> <p><u>14.1.8.4 Fire Helmet</u></p> <p>It is the responsibility of the purchaser to ensure that "Fire helmets shall not be worn by persons riding in enclosed driving and crew areas any time the apparatus is placed in service.</p> <p>14.1.8.4.1 A location for helmet storage shall be provided.</p> <p>14.1.8.4.2 If helmets are to be stored in the driving or crew compartment, the helmets shall be secured in compliance with 14.1.11.2.</p> <p><u>14.1.10 SCBA Mounting</u></p> <p>It is the responsibility of the purchaser to ensure that any SCBA equipment has been supplied and installed on the apparatus in order to achieve compliance with the standard prior to placing it in service.</p> <p>14.1.10.1 Where SCBA units are mounted within a driving or crew compartment, a positive latching mechanical means of holding the SCBA device in its stowed position shall be provided such that the SCBA unit cannot be retained in the mount unless the positive latch is engaged.</p> <p>14.1.10.2 The bracket holding device and its mounting shall retain the SCBA unit when subjected to a 9 G force and shall be installed in accordance with the bracket manufacturer's requirements.</p> <p>14.1.10.3 If the SCBA unit is mounted in a seatback, the release mechanism shall be accessible to the user while seated.</p> <p><u>14.1.11 Equipment Mounting</u></p> <p>It is the responsibility of the purchaser to ensure that any equipment installed on the apparatus by them or their subcontractor meets the following requirements prior to placing it in service.</p> <p>14.1.11.1 All equipment required to be used during an emergency response shall be securely fastened.</p> <p>14.1.11.2 All equipment not required to be used during an emergency response, with the exception of SCBA units, shall not be mounted in a driving or crew area unless it is contained in a fully enclosed and latched compartment capable of containing the contents when a 9 G force is applied in the longitudinal axis of the vehicle or a 9G force is applied in any other direction, or the equipment is mounted in a bracket(s) that can contain the equipment when the equipment is subjected to those same forces.</p> <p><u>Section 15.9.3 Reflective Striping</u></p> <p>It is the responsibility of the purchaser to ensure that Reflective Striping has been supplied and installed on the apparatus in order to achieve compliance with the standard prior to placing it in service.</p> <p>15.9.3.1" A retroreflective stripe(s) shall be affixed to at least 50 percent of the cab and body length on each side, excluding the pump panel areas, and at least 25 percent of the width of the front of the apparatus.</p> <p>15.9.3.1.1 The stripe or combination of stripes shall be a minimum of 4 in. (100 mm) in total width.</p>			
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Bidder
Complies

Yes

No

15.9.3.1.2 The 4 in. (100 mm) wide stripe or combination of stripes shall be permitted to be interrupted by objects (i.e., receptacles, cracks between slats in roll up doors) provided the full stripe is seen as conspicuous when approaching the apparatus.

15.10 Hose Storage

It is the responsibility of the purchaser to ensure that any hose storage area includes a positive means to prevent unintentional deployment in order to achieve compliance with the standard prior to placing it in service.

15.10.7 Any hose storage area shall be equipped with a positive means to prevent unintentional deployment of the hose from the top, sides, front, and rear of the hose storage area while the apparatus is underway in normal operations.